IPT - Data Network Refresh (Toll Bypass) & IP Telephony

IPT - Data Network Refresh (Toll Bypass) & IP Telephony		Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	\$	66,368,703	\$ 66,368,703	\$ 66,368,703	\$ 66,368,703	\$ 66,368,703	\$331,843,513
Implementatio	n Data Ne	etwork Refres	sh (Toll Bypass	s) & IPT			
2. Cabling	\$	5,789,800	\$ 5,202,200	\$ 5,043,800	\$ 4,964,600	\$ 4,964,600	\$ 25,965,000
3. Power in Closets	\$	508,920	\$ 459,135	\$ 425,945	\$ 409,350	\$ 409,350	\$ 2,212,700
4. Data Network Refresh							\$ -
a. Equipment	\$	7,547,631					\$ 20,632,814
b. Installation	\$	811,322				\$ 648,697	
5.Data Network Circuit Capacity	\$		\$	\$ 429,000			\$ 429,000
6.Network Monitoring Tools	\$	2,917,748	\$	- \$	\$ -	- \$	\$ 2,917,748
7. IP Telephony							\$ -
a.Equipment	\$	8,664,893					\$ 30,972,451
b. Installation	\$	2,553,665					\$ 9,663,971
8. Training	\$	197,236					
9. Trade-In Value	\$	(1,621,252)					\$ (5,160,526)
10. Total Refresh & IPT Implementation	\$	27,369,962	\$ 16,904,329	\$ 16,639,677	\$ 15,863,850	\$ 15,079,665	\$ 91,857,483
11. Annual Debt Service	\$	5,960,191					
12. Less Base Capital Budget	\$	(11,357,107)					
13. Net Loss/(Savings)	\$	(5,396,916)	\$ (1,715,762	1,907,760	\$ 5,362,334	\$ 8,646,142	\$ 8,803,558
Ongoing Costs/(Sa	vings) Da	ta Network F	Refresh (Toll By	pass) & IPT			
Maintenance:			•				
14. Data Network Refresh	\$	-	\$ 551,732	\$ 875,339	\$ 1,198,946	\$ 1,522,553	\$ 4,148,570
15. Network Monitoring Tools	\$	-	\$ 106,305	\$ 212,611	\$ 318,916	\$ 425,221	\$ 1,063,053
16. Replace by Data Network Refresh Maintenance	\$	(80,873)	\$ (242,619) \$ (404,364) \$ (566,110) \$ (646,983)	\$ (1,940,950)
17. IP Telephony	\$	-	\$ 2,013,314	\$ 2,954,080	\$ 3,409,053	\$ 3,833,206	\$ 12,209,654
18. Replace by IP Telephony Maintenance	\$	(121,899)					
19. Net Maintenance	\$	(202,772)	\$ 2,097,864	\$ 3,137,008	\$ 3,699,066	\$ 4,328,592	\$ 13,059,758
20. Data Network Circuit Capacity	\$	-	\$.	\$ 1,013,760	\$ 1,013,760	\$ 1,013,760	\$ 3,041,280
Anticipated Savings from Toll Bypass							
21. Circuits	\$	(137,137)					\$ (3,291,297)
22. Toll Bypass	\$	-	\$ (156,555				
23. FTE Savings				\$ (308,659			\$ (1,851,956)
24. MACs	\$	(477,864)					\$ (5,553,248)
25. Total Anticipated Savings	\$	(615,002)	\$ (1,382,420	(2,598,223) \$ (4,085,698	(6,320,428)	\$ (15,001,769)
26. Total Ongoing Costs/(Savings)	\$	(817,774)	\$ 715,444	\$ 1,552,545	\$ 627,129	\$ (978,076)	\$ 1,099,269
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT	\$	(6,214,689)	\$ (1,000,318	3,460,305	\$ 5,989,463	\$ 7,668,066	\$ 9,902,827
28. TCO IPT	\$	60,154,013	\$ 65,368,385	69,829,007	\$ 72,358,165	\$ 74,036,769	\$ 341,746,339
29. Net Loss/(Savings) IPT	\$	(6,214,689)	\$ (1,000,318	3,460,305	\$ 5,989,463		
30. Debt Services Remaining							\$ 34,427,152

Financial Assumptions: IPT - Data Network Refresh (Toll Bypass) & IP Telephony

- 1. TCO Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
- 2. Cabling Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
- 3. Power in Closets Upgrades needed to support IP Telephony:
 - a. Security assume that all closets have capability to lock today.
 - b. Power 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ \$750/room; 95% of rooms will need a large capacity UPS @ \$3700/room.
 - c. Number of closets of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus 175 IDF & 23 MDF; off Phoenix mall sites 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
 - d. Environmental 95% of closets need isolated A/C controls @ \$500/room; 90% of MDF rooms need separte A/C unit at \$2500/room.
 - e. Installation Hardware 10% of closets require additional data rack & associated cable management components @ \$750/room.
- 4. Data Network Refresh; based on list prices & government discounts; refresh based on 4 year cycle.
- 5. Data Network Circuit Capacity Implementation costs to expand data network to handle increased voice traffic:
 - a. Anything less than a T1 is upgraded to a T1
 - b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated
 - c. T1's are available to all State sites.
 - d. Install @ \$700 & existing monthly average costs from TCO.
- 6. Network Monitoring Tools Implemented year 1:1 per main site with LAN/WAN/Voice management capabilities exception is DES with 2 due to size & diversity. List prices plus government discounts.
- 7. IP Telephony:
 - a. Core network & voice services enginneered for redundancy & survivability
 - b. Engineered for basic 911 (additional costs may be required for E911).
 - c. Remote sites where practicable, routers installed instead of call processors.
 - d. List prices with government discounts.
 - e. Integrator costs of 10% are included in the implementation costs.
 - f. Migration to IP Telephony over 5 years based on PBX useful life, data network upgrade, & building cabling needs.
- 8. Training Train the trainers session: 42 IT voice personnel @ \$14K/person & 42 IT WAN personnel @ \$6K/person.
- 9. Trade-In Value 10% of capital investment based on bids received by State of Alaska.
- 10. Total Refresh & IPT Implementation Sum of items 2 through 9.
- 11. Annual Debt Service Financing of Implementation costs @ 3.4%.
- 12. Less Base Capital Budget Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
- 13. Net Loss/(Savings) Sum of items 10 through 12.
- 14. Data Network Refresh Maintenance Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
- 15. Network Monitoring Tools Maintenance Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
- 16. Replace by Data Network Refresh Maintenance Ongoing data network maintenance costs that have been replaced with new equipment.
- 17. IP Telephony Maintenance Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year
- 18. Replace by IP Telephony Maintenance Ongoing voice equipment maintenance costs that have been replaced with new equipment.
- 19. Net Maintenance Sum of items 14. through 18.
- 20. Data Network Circuit Capacity Ongoing costs for circuits identified in item 5.
- 21. Circuits Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
- 22. Toll Bypass Savings in long distance charges as the voice traffic is migrated to the data network:
 - a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
 - b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
 - c. Year 1 no savings.
 - d. Year 2 20% of minutes where converged network available.
 - e. Year 3 30% of minutes where converged network available.
 - f. Year 4 50% of minutes where converged network available.
 - g. Year 5 80% of minutes where converged network available.
 - h. Year 6 100% of minutes where converged network available (not shown in financials as is only 5 year view).
- 23. FTE Savings Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of \$54,037 (from TCO) & 190.4 employees (from TCO);
 - a. Year 1 & 2 no savings
 - b. Year 3 3%
 - c. Year 4 5 %
 - d Year 5 10%
- 24. MACs Savings with moves, adds and changes due to implementation of IP Telephony:
 - a. MAC average annual cost of \$40 per employee based on average between ATS @ \$16.28/employee & industry average @ \$48/employee.
 - b. Savings each year based on % migration to IP Telephony.
- 25. Total Anticipated Savings Sum of items 21. through 24.
- 26. Total Ongoing Costs/(Savings) Sum of items 19., 20., & 25.
- 27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IPT Telephony.
- 28. TCO IPT Sum of items 1., & 27.; represents new TCO after implementing Data Network Refresh & IP Telephony.
- 29. Net Loss/(Savings) IPT Difference of items 1, & 28; represents incremental impact to TCO.
- 30. Debt Services Remaining Debt service remaining after year 5.

As Is - Data Network Refresh (Toll Bypass)

As Is - Data Network Refresh (Toll Bypass)		Year 1		Year 2		Year 3		Year 4		Year 5	Total
1. TCO	\$	66,368,703	\$	66,368,703	\$	66,368,703	\$	66,368,703	\$	66,368,703	\$331,843,513
Implementation	on Data	Network Re	fro	sh /Toll Byna	ee)						
2. Cabling	I s		\$		\$. 1	\$		\$	- [\$	
3. Power in Closets	\$		\$	-	\$		\$		\$	- \$	_
4. Data Network Refresh	Ť		Ψ		Ψ		Ψ		Ψ	<u> </u>	
a. Equipment	\$	7,547,631	\$	3,271,296	\$	3,271,296	\$	3,271,296	\$	3,271,296 \$	20,632,814
b. Installation	\$	811,322		648,697		648,697		648,697		648,697 \$	3,406,111
5.Data Network Circuit Capacity	\$		\$	-	\$	429,000			\$	- \$	429,000
6.Network Monitoring Tools	\$	2,917,748	\$	-	\$		\$	-	\$	- \$	2,917,748
7. IP Telephony	\$	-	\$	-	\$	-	\$	-	\$	- \$	-
a.Equipment	\$	-	\$	-	\$	-	\$	-	\$	- \$	-
b. Installation	\$	-	\$	-	\$		\$	-	\$	- \$	-
8. Training	\$	-	\$	-	\$	-	\$	-	\$	- \$	-
9. Trade-In Value	\$	(754,763)	\$	(327,130)	\$	(327,130)	\$	(327,130)	\$	(327,130) \$	(2,063,281)
10. Total Refresh Implementation	\$	10,521,938	\$	3,592,863	\$	4,021,863	\$		\$	3,592,863 \$	25,322,392
11. Less Base Capital Budget	\$	(11,357,107)	\$	(11,357,107)	\$	(11,357,107)	\$	(11,357,107)	\$	(11,357,107) \$	(56,785,535)
12. Net Loss/(Savings)	\$	(835,169)	\$	(7,764,244)	\$	(7,335,244)	\$	(7,764,244)	\$	(7,764,244) \$	(31,463,143)
Ongoing Costs/(Sa	avings)	Data Netwo	rk R	Refresh (Toll	Вура	ass)					
Maintenance:											
13. Data Network Refresh	\$	-	\$	551,732		875,339	\$	1,198,946	\$	1,522,553 \$	4,148,570
14. Network Monitoring Tools	\$		\$	106,305		212,611		318,916		425,221 \$	1,063,053
15. Replace by Data Network Refresh Maintenance	\$	(80,873)		(242,619)	\$	(404,364)		(566,110)		(646,983) \$	(1,940,950)
16. Net Maintenance	\$	(80,873)	\$	309,113	\$	470,975	\$	632,836	\$	875,570 \$	2,207,620
17. Data Network Circuit Capacity	\$	-	\$		\$	1,013,760	\$	1,013,760	\$	1,013,760 \$	3,041,280
Anticipated Savings from Toll Bypass		(407.407)		(444, 440)	Φ.	(005.007)	Φ.	(050,000)	•	(4.007.000)	(0.004.007)
18. Circuits	\$	(137,137)		(411,412)		(685,687)		(959,962)	\$	(1,097,099) \$	(3,291,297) (4,305,268)
19. Toll Bypass 20. FTE Savings	\$		\$	(156,555)	\$	(469,666) (308,659)		(1,174,164) (514,432)	\$	(2,504,883) \$ (1,028,864) \$	(4,305,268)
21. MACs	\$		\$		\$		\$	(514,432)	\$	(1,028,864) \$	(1,851,956)
22. Total Anticipated Savings	\$	(137,137)		(567,967)		(1,464,012)		(2,648,558)		(4,630,847) \$	(9,448,521)
22. Total Anticipated Savings	•	(137,137)	Ð	(307,907)	Ð	(1,464,012)	P	(2,040,550)	Þ	(4,030,047) \$	(9,446,521)
23. Total Ongoing Costs/(Savings)	\$	(218,010)	\$	(258,854)	\$	20,723	\$	(1,001,962)	\$	(2,741,517) \$	(4,199,621)
24. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	\$	(1,053,179)	\$	(8,023,098)	\$	(7,314,521)	\$	(8,766,206)	\$	(10,505,760) \$	(35,662,764)
	As Is	s Loss/(Savir	igs)								
25. FTE Savings	\$		\$		\$	-		-		- \$	-
26. Total As Is Loss/(Savings)	\$	-	\$		\$	-	\$	-	\$	- \$	
27. TCO As is	\$	65,315,523	\$	58,345,605	\$	59,054,182	\$	57,602,497	\$	55,862,942 \$	296,180,749
29. Not Lecal/Sovings) As Is	\$	(4.052.470)	¢	(9.022.000)	¢	(7.214.524)	¢	(9.766.000)	¢	(10 FOF 760) C	(35,662,764)
28. Net Loss/(Savings) As Is	Þ	(1,053,179)	Φ	(8,023,098)	Э	(7,314,521)	Ф	(8,766,206)	Ф	(10,505,760) \$	(35,002,764)

Financial Assumptions: As Is - Data Network Refresh (Toll Bypass)

- 1. TCO Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
- 2. Cabling Not applicable.
- 3. Power in Closets Not applicable
- 4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
- 5. Data Network Circuit Capacity Implementation costs to expand data network to handle increased voice traffic:
 - a. Anything less than a T1 is upgraded to a T1
 - b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
 - c. T1's are available to all State sites.
 - d. Install @ \$700 & existing monthly average costs from TCO
- 6. Network Monitoring Tools Implemented year 1:1 per main site with LAN/WAN/Voice management capabilities exception is DES with 2 due to size & diversity. List price plus government discounts.
- 7. IP Telephony Not applicable.
- 8. Training Not applicable.
- 9. Trade-In Value 10% of capital investment based on bids received by State of Alaska.
- 10. Total Refresh Implementation Sum of items 2 through 9.
- 11. Less Base Capital Budget Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
- 12. Net Loss/(Savings) Sum of items 10 through 11.
- 13. Data Network Refresh Maintenance Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
- 14. Network Monitoring Tools Maintenance Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
- 15. Replace by Data Network Refresh Maintenance Ongoing data network maintenance costs that have been replaced with new equipment.
- 16. Net Maintenance Sum of items 13. through 15.
- 17. Data Network Circuit Capacity Ongoing costs for circuits identified in item 5.
- 18. Circuits Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
- 19. Toll Bypass Savings in long distance charges as the voice traffic is migrated to the data network:
 - a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
 - b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
 - c. Year 1 no savings.
 - d. Year 2 20% of minutes where converged network available.
 - e. Year 3 30% of minutes where converged network available.
 - f. Year 4 50% of minutes where converged network available.
 - g. Year 5 80% of minutes where converged network available.
 - h. Year 6 100% of minutes where converged network available (not shown in financials as is only 5 year view).
- 20. FTE Savings Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of \$54,037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 & 2 no savings
 - b. Year 3 3% c. Year 4 - 5 %
 - c. Year 4 5 %
- d. Year 5 10% 21. MACs - Not applicable.
- 22. Total Anticipated Savings Sum of items 18. through 21.
- 23. Total Ongoing Costs/(Savings) Sum of items 16. 17.. & 22.
- 24. Net Loss/(Savings) Data Network Refresh (Toll Bypass) Sum of items 12. & 23.; represents incremental impact of implementing Data Network Refresh.
- 25. FTE Savings No change in FTE for the "As Is" service delivery option.
- 26. Total As Is Loss/(Savings) Sum of item 25.
- 27. TCO As Is Sum of items 1., 24., & 26; represents new TCO after implementing Data Network Refresh for the As Is service delivery option.
- 28. Net Loss/(Savings) As Is Difference of items 1. & 30; represents incremental impact to TCO.

As Is - Data Network Refresh (Toll Bypass) & IP Telephony

As Is - Data Network Refresh (Toll Bypass) & IP Telephony		Year 1	'	Year 2	Year	3	Yea	r 4		Year 5	Total
1. TCO	\$	66,368,703	¢	66,368,703	¢ 66	368,703	¢ 6	6,368,703	•	66,368,703	\$331,843,513
1.100	φ	00,300,703	φ	00,300,703	φ 00,	300,703	\$	3,300,703	φ	00,308,703	φ331,043,313
Implementation Da	ata Ma	otwork Pofro	sh (To	oll Bypace)	& IDT						
2. Cabling	\$	5,789,800		5,202,200		043,800	¢.	1,964,600	Tσ	4,964,600	\$ 25,965,000
2. Cabling 3. Power in Closets	\$	5,789,800				425.945		409,350		4,964,600	
4. Data Network Refresh	- D	506,920	Ф	459,135	Đ ·	+25,945	Ф	409,330	Ф	409,330	\$ 2,212,700 e
a. Equipment	\$	7,547,631	\$	3,271,296	\$ 3.	271,296	¢ 2	3,271,296	\$	3,271,296	\$ 20,632,814
b. Installation	\$	811,322					\$	648,697			\$ 3,406,111
5.Data Network Circuit Capacity	\$		\$			429,000	7	-	\$		\$ 429,000
6.Network Monitoring Tools	\$		\$	_	\$	-	\$	_	\$	-	\$ 2,917,748
7. IP Telephony	Ť	_,0,	-		*		*		Ť		\$ -
a.Equipment	\$	8.664.893	\$	6.210.002	\$ 5.	791,326	\$:	5,581,988	\$	4,724,243	\$ 30,972,451
b. Installation	\$	2,553,665		1,896,553		780,630		1,722,669		1,710,454	\$ 9,663,971
8. Training	\$	197,236				155,245		150,579		150,579	
9. Trade-In Value	\$	(1,621,252)		(948,130)		906,262)		(885,328)		(799,554)	
10. Total Refresh & IPT Implementation	\$	27,369,962		16,904,329	\$ 16,	639,677	\$ 15	5,863,850		15,079,665	
·											
11. Annual Debt Service	\$	5,960,191	\$	9,641,345	\$ 13,	264,867	\$ 16	5,719,441	\$	20,003,249	\$ 65,589,093
12. Less Base Capital Budget	\$	(11,357,107)	\$	(11,357,107)	\$ (11,	357,107)	\$ (1	1,357,107)) \$	(11,357,107)	\$ (56,785,535
13. Net Loss/(Savings)	\$	(5,396,916)	\$	(1,715,762)	\$ 1,	907,760	\$	5,362,334	\$	8,646,142	\$ 8,803,558
Ongoing Costs/(Saving	ıs) Da	ata Network F	Refres	sh (Toll Byp	oass) & IP	Т					
Maintenance:	T			` '					Т		
14. Data Network Refresh	\$	-	\$	551,732	\$	375,339	\$	1,198,946	\$	1,522,553	\$ 4,148,570
15. Network Monitoring Tools	\$	-	\$	106,305	\$	212,611	\$	318,916	\$	425,221	\$ 1,063,053
16. Replace by Data Network Refresh Maintenance	\$	(80,873)	\$	(242,619)	\$ (404,364)	\$	(566,110)) \$	(646,983)	\$ (1,940,950
17. IP Telephony	\$	-	\$	2,013,314	\$ 2,	954,080	\$:	3,409,053	\$	3,833,206	\$ 12,209,654
18. Replace by IP Telephony Maintenance	\$	(121,899)	\$	(330,869)	\$ (500,657)	\$	(661,738)) \$	(805,405)	\$ (2,420,568
19. Net Maintenance	\$	(202,772)	\$	2,097,864	\$ 3,	137,008	\$:	3,699,066	\$	4,328,592	\$ 13,059,758
20. Data Network Circuit Capacity	\$	-	\$	-	\$ 1,	013,760	\$	1,013,760	\$	1,013,760	\$ 3,041,280
Anticipated Savings from Toll Bypass											
21. Circuits	\$	(137,137)	\$	(411,412)		685,687)		(959,962)		(1,097,099)	
22. Toll Bypass	\$	-	\$	(156,555)		469,666)		1,174,164)			\$ (4,305,268
23. FTE Savings						308,659)		(514,432)		(1,028,864)	
24. MACs	\$	(477,864)		(814,452)		134,211)		1,437,140)		(1,689,581)	
25. Total Anticipated Savings	\$	(615,002)	\$	(1,382,420)	\$ (2,	598,223)	\$ (4	4,085,698)) \$	(6,320,428)	\$ (15,001,769
26. Total Ongoing Costs/(Savings)	\$	(817,774)	\$	715,444	\$ 1,	552,545	\$	627,129	\$	(978,076)	\$ 1,099,269
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT	\$	(6,214,689)	\$	(1,000,318)	\$ 3,	460,305	\$	5,989,463	\$	7,668,066	\$ 9,902,827
	A = 1=	a Laga//Cavin									
28. FTE Savings	AS IS	S Loss/(Savin			\$		\$		\$	-	¢
28. FTE Savings 29. Total As Is Loss/(Savings)	\$	-		-			\$		\$	-	
Zo. Total Ao to Lood(Oavillyo)	Ą	-	Ψ	-	Ψ		Ψ		φ	-	-
30. TCO As Is	\$	60,154,013	¢	65,368,385	Ф 00	329,007	¢ 7	2,358,165	¢	74,036,769	\$ 341,746,339
30. 100 A3 I3	Ф	00,134,013	Ψ	00,300,385	φ 69,	329,007	Ψ //	2,000,100	Ф	74,030,769	φ 341,740,339
24 Net Lecel/Sovings) As Is	6	(6.214.620)	¢	(4,000,340)	¢ 2	160.205	¢ ,	000 400	4	7 669 000	¢ 0.000.007
31. Net Loss/(Savings) As Is	\$	(6,214,689)	Ф	(1,000,318)	\$ 3,	460,305	a (5,989,463	\$	7,668,066	
32. Debt Services Remaining											\$ 34,427,152

Financial Assumptions: As Is - Data Network Refresh (Toll Bypass) & IP Telephony

- 1. TCO Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
- 2. Cabling Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
- 3. Power in Closets Upgrades needed to support IP Telephony:
 - a. Security assume that all closets have capability to lock today.
 - b. Power 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ \$750/room; 95% of rooms will need a large capacity
 - c. Number of closets of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus 175 IDF & 23 MDF; off Phoenix mall sites 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
 - d. Environmental 95% of closets need isolated A/C controls @ \$500/room; 90% of MDF rooms need separte A/C unit at \$2500/room.
 - e. Installation Hardware 10% of closets require additional data rack & associated cable management components @ \$750/room.
- 4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
- 5. Data Network Circuit Capacity Implementation costs to expand data network to handle increased voice traffic:
 - a. Anything less than a T1 is upgraded to a T1
 - b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
 - c. T1's are available to all State sites.
 - d. Install @ \$700 & existing monthly average costs from TCO
- 6. Network Monitoring Tools Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities exception is DES with 2 due to size & diversity. List prices plus government discounts.
- IP Telephony:
 - a. Core network & voice services enginneered for redundancy & survivability
 - b. Engineered for basic 911 (additional costs may be required for E911).
 - c. Remote sites where practicable, routers installed instead of call processors.
 - d. List prices with government discounts.
 - e. Integrator costs of 10% are included in the implementation costs.
 - f. Migration to IP Telephony over 5 years based on PBX useful life, data network upgrade, & building cabling needs.
- 8. Training Train the trainers session: 42 IT voice personnel @ \$14K/person & 42 IT WAN personnel @ \$6K/person.
- 9. Trade-In Value 10% of capital investment based on bids received by Alaska.
- 10. Total Refresh & IPT Implementation Sum of items 2 through 9.
- 11. Annual Debt Service Financing of Implementation costs @ 3.4%.
- 12. Less Base Capital Budget Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
- 13. Net Loss/(Savings) Sum of items 10 through 12.
- 14. Data Network Refresh Maintenance Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
- 15. Network Monitoring Tools Maintenance Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
- 16. Replace by Data Network Refresh Maintenance Ongoing data network maintenance costs that have been replaced with new equipment.
- 17. IP Telephony Maintenance Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
- 18. Replace by IP Telephony Maintenance Ongoing voice equipment maintenance costs that have been replaced with new equipment.
- 19. Net Maintenance Sum of items 14. through 18.
- 20. Data Network Circuit Capacity Ongoing costs for circuits identified in item 5.
- 21. Circuits Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
- 22. Toll Bypass Savings in long distance charges as the voice traffic is migrated to the data network:
 - a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
 - b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
 - c. Year 1 no savings.
 - d. Year 2 20% of minutes where converged network available.
 - e. Year 3 30% of minutes where converged network available.
 - f. Year 4 50% of minutes where converged network available.
 - g. Year 5 80% of minutes where converged network available.
 - h. Year 6 100% of minutes where converged network available (not shown in financials as is only 5 year view).
- 23. FTE Savings Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of \$54,037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 & 2 no savings
 - b. Year 3 3%
 - c. Year 4 5 %
 - d. Year 5 10%
- 24. MACs Savings with moves, adds and changes due to implementation of IP Telephony:
 - a. MAC average annual cost of \$40 per employee based on average between ATS @ \$16.28/employee & industry average @ \$48/employee.
 - b. Savings each year based on % migration to IP Telephony.
- 25. Total Anticipated Savings Sum of items 21. through 24.
- 26. Total Ongoing Costs/(Savings) Sum of items 19., 20., & 25.
- 27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IPT Telephony.
- 28. FTE Savings No change in FTE for the "As Is" service delivery option.
- 29. Total As Is Loss/(Savings) Sum of item 28.
- 30. TCO As Is Sum of items 1., 27., & 29; represents new TCO after implementing Data Network Refresh & IP Telephony for the As Is service delivery option.
- 31. Net Loss/(Savings) As Is Difference of items 1. & 30; represents incremental impact to TCO.
- 32. Debt Services Remaining Debt service remaining after year 5.

Decentralized - Data Network Refresh (Toll Bypass)

Decentralized - Data Network Refresh (Toll Bypass)		Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	\$	66,368,703	\$ 66,368,703	\$ 66,368,703	\$ 66,368,703	\$ 66,368,703	\$331,843,513
Implementation	on Data	a Network Re	fresh (Toll Bypa	ıss)			
2. Cabling	\$	7,390,780		\$ -	\$ -	\$ -	\$ 7,390,780
3. Power in Closets	\$	1,616,800	\$ -	\$ -	\$ -	\$ -	\$ 1,616,800
4. Data Network Refresh							\$ -
a. Equipment	\$	12,756,836	\$ 1,819,525	\$ 1,418,227	\$ 1,366,930	\$ 3,271,296	\$ 20,632,814
b. Installation	\$	1,914,122	\$ 321,041	\$ 269,550	\$ 252,701	\$ 648,697	\$ 3,406,111
5.Data Network Circuit Capacity	\$	-	\$ -	\$ 429,000	\$ -	\$ -	\$ 429,000
6.Network Monitoring Tools	\$	2,917,748	\$ -	\$ -	\$ -	\$ -	\$ 2,917,748
7. IP Telephony	\$		\$ -	\$ -	\$ -	\$ -	\$ -
a.Equipment	\$	14,301,881	\$ -	\$ -	\$ -	\$ -	\$ 14,301,881
b. Installation	\$	4,861,136		\$ -	\$ -	\$ -	\$ 4,861,136
8. Training	\$	560,599		\$ -	\$ -	\$ -	\$ 560,599
9. Trade-in Value	\$	(2,705,872)	\$ (181,953)	\$ (141,823)	\$ (136,693) \$ (327,130)	\$ (3,493,469)
10. Total Refresh Implementation	\$	43,614,030	\$ 1,958,613	\$ 1,974,955	\$ 1,482,938	\$ 3,592,863	\$ 52,623,400
11. Less Base Capital Budget	\$	(11,357,107)	\$ (11,357,107)	\$ (11,357,107)	\$ (11,357,107	(11,357,107)	\$ (56,785,535)
12. Net Loss/(Savings)	\$	32,256,923	\$ (9,398,494)	\$ (9,382,152)	\$ (9,874,169) \$ (7,764,244)	\$ (4,162,135)
Ongoing Costs/(Sa	avinas)	Data Netwo	rk Refresh (Toll	Bynass)			
Maintenance:	1					T	
13. Data Network Refresh	\$		\$ 1,083,991	\$ 1,260,675	\$ 1,394,192	\$ 1,522,553	\$ 5,261,411
14. Network Monitoring Tools	\$	_	\$ 106.305		\$ 318,916		\$ 1,063,053
15. Replace by Data Network Refresh Maintenance	\$	(80,873)					
16. IP Telephony	\$	(00,070)	\$ 2.579.077				
17. Replace by IP Telephony Maintenance	\$	(200,263)					
18. Net Maintenance	\$	(281,136)					
To. Net Maintenance	Ť	(201,100)	Ψ 0,120,220	Ψ 0,241,410	Ψ 0,020,040	ψ 0,470,042	Ψ 12,001,400
19. Data Network Circuit Capacity	\$	_	¢ _	\$ 1,013,760	\$ 1,013,760	\$ 1,013,760	\$ 3,041,280
19. Data Network Oricuit Gapacity	Ψ	-	Ψ	Ψ 1,013,700	1,013,700	1,013,700	Ψ 3,041,200
Anticipated Savings from Toll Bypass							
20. Circuits	\$	(811,853)	\$ (109,710)	\$ (87,768)	\$ (87.768) \$ (1,097,099)	\$ (2,194,198)
21. Toll Bypass	\$	(611,033)	(\$460.147)	(\$788.662)	(\$1,442,343		
22. FTE Savings	Ф	-	(\$400,147)	\$ (308,659)			
23. MACs	\$	(780,793)	\$ (780,793)				
24. Total Anticipated Savings	\$	(1,592,647)					
24. Total Anticipated Savings	ð	(1,392,047)	φ (1,350,650)	φ (1,903,883)	φ (2,023,337	j φ (5,411,640)	φ (13,140,157)
25. Total Ongoing Costs/(Savings)	\$	(1,873,782)	\$ 1,775,578	\$ 2,295,350	\$ 1,513,972	\$ (918,538)	\$ 2,792,580
25. Total Origonig Costs/(Savings)	•	(1,873,782)	φ 1,775,578	φ 2,295,350	a 1,513,972	φ (918,538)	φ 2,792,580
On Next Lead (On the set Next Lead Profession (Tall December)		00.000.444	A (7.000.04F)	A (7.000.000)	(0.000.40 7	(0.000.700)	A (4.000 FF0)
26. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	\$	30,383,141	\$ (7,622,915)	\$ (7,086,803)	\$ (8,360,197) \$ (8,682,782)	\$ (1,369,556)

27. ATS Migration	ralized Data N	(6,262,923)		(12,525,846)		2 525 040	¢ /40	525,846)	e //o	525,846) \$	(56,366,30
27. A 15 migration 28. MAGNET/WAN FTE	\$					2,525,846)	\$ (12,				
8. MAGNET/WAN FTE	2	29,800		59,600	\$	59,600	\$	59,600	\$	59,600 \$	268,20
29. Telephony Services										s	
a. 35 or less Employees										\$	
1. Implementation										\$	
A. Installation	\$	23,912								\$	
B. Phone Purchase	\$	10,675								\$	
2. Monthly		10,010								\$	
A. Line	\$	107,604	\$	215,208	\$	215,208	\$	215,208	\$	215,208 \$	968,43
B. Voice Messaging	\$	32,025	\$	64,050			\$	64,050		64,050	288,22
b. 36 plus Employees refer to 7. IP Telephony Numbers		02,020	<u> </u>	01,000	V	01,000	<u> </u>	0.,000	•	\$	
30. Long Distance			_	0.444.500	•					\$	
a. ATS Long Distance Charges	\$	3,222,294	\$	6,444,588		0,111,000		444,588		444,588 \$	-,,-
b. ATS Private Tandem Network Minutes	\$	457,396	\$	377,041	\$	300,344	\$	240,554	\$	182,958	, ,,,,,,,,
c. Carrier PICX	\$	140,000								\$	140,00
B1. Web Hosting										\$	
a. Implementation	\$	166,000								9	
b. Monthly	\$	740	\$	1,481	\$	1,481	\$	1,481	\$	1,481 \$	6,66
32. ISP										\$	
a. 35 or less Employees 1. Transport										\$	
A. Implementation	\$	4,257								\$	4,25
B. Monthly	\$	22,704	\$	45,408	•	45,408	¢	45,408	\$	45,408 \$	204.33
2. Internet		22,704	Ψ	45,400	Ψ	45,400	Ψ	45,400	Ψ	45,400 \$	204,55
A. Implementation	\$	645								\$	64
B. Monthly	\$	5,663	\$	11,326	S	11,326	\$	11,326	s	11,326 \$	50,96
b. 36 plus Employees	_	0,000	Ψ	11,020	Ψ	11,020	Ψ	11,020	Ψ	\$	00,00
1. Transport										\$	
A. Implementation	\$	49,500								•	49,50
B. Monthly	\$	66,000	\$	132,000	2	132,000	\$	132,000	¢	132,000 \$	594,00
2. Internet Monthly	\$	234,300	\$		\$	468,600		468,600		468,600 \$	2,108,70
			,		,	,	Ť				,
33. Call Centers										\$	
a. Startup	\$	5,089,300								\$	
b. Monthly										\$	
1. Carrier Costs	\$	120,600	\$	241,200	\$	241,200		241,200		241,200 \$.,,,,,,,
2. Vendor Support	\$	142,033	\$	284,065				284,065		284,065	
3. Equip/Maint/License	\$	201,100	\$	508,930		508,930		508,930		508,930	_,,,
4. FTE Costs	\$	140,000	\$	280,000	\$	280,000	\$	280,000	\$	280,000 \$	1,260,00
34. Connection to PSTN										S	
a. 35 or less Employees refer to 27. a.										\$	
b. 36 to 100 Employees										\$	
1. Implementation	\$	7,200								\$	
2. Monthly	\$	86,400	œ.	172,800	¢	172,800	¢	172,800	e	172,800 \$	
c. 101 - 245 Employees	Ψ	80,400	Ψ	172,000	Ψ	172,000	Ψ	172,000	Ψ	\$	
1. Implementation	\$	14,400								\$	
2. Monthly	\$	172,800	\$	345,600	¢	345,600	\$	345,600	\$	345,600 \$	
2. monuny	Φ	1/2,000	φ	343,000	٩	J4J,0UU	Ψ	J+J,0UU	Ψ	345,600 \$	
d 246 plus Emloyees	\$	69,597							1	\$	69.59
d. 246 plus Emioyees			\$	1,670,328	\$	1,670,328	\$ 1.	670,328	¢ 1	670,328 \$,
1. Implementation		825 164		1,070,328	φ	1,010,328	ψ 1,	010,320	ψ 1,	0,0,020	, ,510,47
	\$	835,164									
1. Implementation 2. Monthly	\$	·	¢	1 100 114	¢	1 122 114	¢ 4	100 114	¢ 4	122 114	E 040 F
Implementation Monthly 35. FTE	\$	561,057	\$	1,122,114		1,122,114		122,114		122,114 \$	
1. Implementation 2. Monthly	\$	·	\$	1,122,114 (81,508)		1,122,114 (158,204)		122,114 217,995)		122,114 \$ 275,590) \$	
1. Implementation 2. Monthly 35. FTE 36. Total Decentralized Loss/(Savings)	\$	561,057 5,803,608	\$	(81,508)	\$	(158,204)	\$ (217,995)	\$ (275,590) \$	5,070,31
1. Implementation 2. Monthly 35. FTE	\$	561,057	\$		\$		\$ (\$ (5,070,31

Financial Assumptions: Decentralized - Data Network Refresh (Toll Bypass)

- 1. TCO Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
- 2. Cabling For agencies migrating from ATS only; development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
- 3. Power in Closets For agencies migrating from ATS only; upgrades needed to support IP Telephony:
 - a. Security assume that all closets have capability to lock today.
 - b. Power 95 % of MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ \$750/room; 95% of rooms will need a large capacity UPS @ \$3700/room.
 - c. Number of closets Based on agencies with ATS services.
 - d. Environmental 95% of closets need isolated A/C controls @ \$500/room; 90% of MDF rooms need separte A/C unit at \$2500/room.
 - e. Installation Hardware 10% of closets require additional data rack & associated cable management components @ \$750/room.
- 4. Data Network Refresh: based on list prices & government discount; refresh based on 4 year cycle.
- 5. Data Network Circuit Capacity Implementation costs to expand data network to handle increased voice traffic:
 - a. Anything less than a T1 is upgraded to a T1
 - b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
 - c. T1's are available to all State sites.
 - d. Install @ \$700 & existing monthly average costs from TCO
- 6. Network Monitoring Tools Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities exception is DES with 2 due to size & diversity. Costs based on list prices & government discounts.
- 7. IP Telephony for agencies migrating from ATS:
 - a. Core network & voice services enginneered for redundancy & survivability
 - b. Engineered for basic 911 (additional costs may be required for E911).
 - c. Remote sites where practicable, routers installed instead of call processors.
 - d. Costs based on list prices & government discounts.
 - e. Integrator costs of 10% are included in the implementation costs.
 - f. Migration to IP Telephony in year 1 for ATS customers.
- 8. Training Train the trainers session: IT voice personnel @ \$14K/person & IT WAN personnel @ \$6K/person based on employees in agencies with ATS services today.
- 9. Trade-In Value 10% of capital investment based on bids received by State of Alaska.
- 10. Total Refresh Implementation Sum of items 2 through 9.
- 11. Less Base Capital Budget Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
- 12. Net Loss/(Savings) Sum of items 10 through 11.
- 13. Data Network Refresh Maintenance Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
- 14. Network Monitoring Tools Maintenance Ongoing maintenance costs associated with item 6: assumed no maintenance costs first year.
- 15. Replace by Data Network Refresh Maintenance Ongoing data network maintenance costs that have been replaced with new equipment.
- 16. IP Telephony Maintenance Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
- 17. Replace by IP Telephony Maintenance Ongoing voice equipment maintenance costs that have been replaced with new equipment.
- 18. Net Maintenance Sum of items 13. through 17.
- 19. Data Network Circuit Capacity Ongoing costs for circuits identified in item 5.
- 20. Circuits Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
- 21. Toll Bypass Savings in long distance charges as the voice traffic is migrated to the data network:
 - a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
 - b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
 - c. Year 1 no savings.
 - d. Year 2 20% of minutes where converged network available.
 - e. Year 3 30% of minutes where converged network available.
 - f. Year 4 50% of minutes where converged network available.
 - g. Year 5 80% of minutes where converged network available.
 - h. Year 6 100% of minutes where converged network available (not shown in financials as is only 5 year view).
- 22. FTE Savings Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of \$54037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 & 2 no savings
 - b. Year 3 3%
 - c. Year 4 5 %
 - d. Year 5 10%
- 23. MACs Savings with moves, adds and changes due to implementation of IP Telephony (ATS customers):
 - a. MAC average annual cost of \$40 per employee based on average between ATS @ \$16.28/employee & industry average @ \$48/employee.
 - b. Savings each year based on % migration to IP Telephony.
- 24. Total Anticipated Savings Sum of items 20. through 23.
- 25. Total Ongoing Costs/(Savings) Sum of items 18., 19., & 24.
- 26. Net Loss/(Savings) Data Network Refresh (Toll Bypass) Sum of items 12. & 25.; represents incremental impact of implementing Data Network Refresh.
- 27. ATS Migration Migration completed after year 1; 50% of ATS costs removed year 1; 100% year 2 5.
- 28. MAGNET/WAN FTE 1 WAN FTE in ISD to manage network for agency mainframe applications that have traffic on MAGNET; average annual loaded salary from TCO \$59.6K.
- 29. Telephony Services Implementation & ongoing costs for agency employees migrating from ATS services:
 - a. 35 employees or less Purchase Centrex services from statewide carrier contracts:
 - 1. Implementation per Centrex line \$56
 - 2. Cost to purchase phone \$25
 - 3. Monthly line charge \$42.00
 - 4. Monthly voice mail \$12.50
 - b. 36 Plus Employees Migrating to IP Telephony & calculated in line 7.

- 30. Long Distance Carrier bills paid by ATS will now be paid by each agency separately:
 - a. 50% charged to agencies year 1 & 100% year 2-5 (offset for toll bypass in item 22.).
 - b. Agencies will pay long distance rates to the Carriers @ \$0.055/minute for traffic currently on the ATS private voice network; 50% of traffic year 1 & 100% yer 2-5 & offset for toll bypass in item 22.
 - c. One time charge of \$10 to change the Carrier PICX on each DID trunk and Centrex line conversion of 14,000 lines.
- 31. Web Hosting Transfer of agencies utilizing ATS for web hosting:
 - a. Implementation costs \$1000 transfer & \$1000 setup per web site
 - b. Monthly costs \$12/10 mb.
 - c. 75 agencies with 83 web sites
- 32. ISP Transfer of agencies utilizing ATS for ISP (used ATS handset counts):
 - a. 35 or less employees:
 - 1. Transport 1 DSL per agency; implementation charge \$99; monthly charge \$88
 - 2. Internet Implementation \$15/employee; monthly charge \$21.95/employee
 - b. Medium & Large Agencies:
 - 1. Transport 1 T1 per agency; Implementation charge \$900; monthly charge \$200
 - 2. Internet \$710/month charge/agency for ISP bandwidth & agencies have their own e-mail
- 33. Call Centers Agencies currently utilizing ATS for Call Centers will implement their own; implementation & ongoing costs based on costs to replicate ATS Call Centers.
- 34. Connection to PSTN:
 - a. Small agencies have Cenrex as shown in item 30.
 - b. Agencies 36 100 employees at location 1 T1 including 2-way DID; implementation cost \$900; monthly \$1800
 - c. Agencies 101 245 employees at location 2 T1's including 2-way DID: implemention cost \$900/T1; monthly \$1800/T1
 - d. 246 plus employees at location for every 100 employees/location need 1 T1; implementation cost \$900/T1; monthly \$1800/T1
- 35. FTE Additional FTE needs due to agencies now handling own telephone & WAN services; used industry standard of 1 IT employee/495 ports; average annual salary based on annual average loaded salary of \$54037 for voice/WAN employee from TCO.
- 36. Total Decentralized Loss/(Savings) Sum of items 27. Through 35.
- 37. TCO Dencentralized Sum of items 1, 26, & 36, represents new TCO after implementing Data Network Refresh, and the Decentralized service delivery option.
- 38. Net Loss/(Savings) Decentralized Difference of items 1. & 37.; represents incremental impact to TCO.

Dencentralized - Data Network Refresh (Toll Bypass) & IP Telephony

Decentralized - Data Network Refresh (Toll Bypass) & IP Telephony		Year 1	Year 2			Year 3		Year 4		Year 5	Total
1. TCO	\$	66,368,703	\$ 66,368	,703	\$	66,368,703	\$	66,368,703	\$	66,368,703	\$331,843,513
lumlamantatia	n Dete	Notwork Do	frack /Tall D		/						
Implementatio 2. Cabling		6,966,020		,300		4,906,880	¢	4,787,600	I e	4,187,200	\$ 25,965,000
3. Power in Closets	\$	1,126,451		,403		342,525		185,411		115,910	
4. Data Network Refresh	Ψ	1,120,401	ψ ++2	,+05	Ψ	342,323	Ψ	105,411	Ψ	113,910	\$ 2,212,700
a. Equipment	\$	13,096,463	\$ 1,868	,043	\$	1,272,672	\$	1,124,339	\$	3,271,296	\$ 20,632,814
b. Installation	\$	1,981,310	\$ 330	,639	\$	240,756		204,710	\$	648,697	
5.Data Network Circuit Capacity	\$		\$		\$	429,000		-	\$		\$ 429,000
6.Network Monitoring Tools	\$	2,917,748			\$	-	\$	-	\$	-	\$ 2,917,748
7. IP Telephony a.Equipment	\$	16,349,282	\$ \$ 5,805		\$	4,746,999	\$	2,622,648	\$	1,448,344	\$ 30,972,451
b. Installation	\$	4,877,316			\$	1,544,172		969,989		432,600	\$ 30,972,45 \$ 9,663,97
8. Training	\$	406,486		.736		127,601		57,404			\$ 799,552
9. Trade-In Value	\$	(2,944,575)		,322)		(601,967)		(374,699)		(471,964)	
10. Total Refresh Implementation	\$	44,776,502				13,008,638		9,577,402		9,674,409	
11. Annual Debt Service	\$	9,750,708				15,806,834		17,892,447		19,999,185	\$ 76,423,196
12. Less Base Capital Budget	\$	(11,357,107)				(11,357,107)		(11,357,107)		(11,357,107)	
13. Net Loss/(Savings)	\$	(1,606,399)	\$ 1,616	,915	\$	4,449,727	\$	6,535,340	\$	8,642,078	\$ 19,637,661
	. ,	D (N (,					
Ongoing Costs/(Sa	vings)	Data Networ	K Refresh (OII E	зура	SS)					
Maintenance:	œ.		\$ 1,102	040	\$	1,246,747	•	4.050.070	\$	1,454,157	\$ 5,160,024
14. Data Network Refresh 15. Network Monitoring Tools	\$				\$	212,611		1,356,878 318,916		425,221	
16. Replace by Data Network Refresh Maintenance	\$	(80,873)		,619)	7	(404,364)		(566,110)		(646,983)	
17. IP Telephony	\$,203		2,791,164		3,352,075		3,648,749	
18. Replace by IP Telephony Maintenance	\$	(200,263)	\$ (400	,526)	\$	(400,526)		(400,526)		(400,526)	\$ (1,802,366
19. Net Maintenance	\$	(281,136)	\$ 2,638	,606	\$	3,445,631	\$	4,061,233	\$	4,480,617	\$ 14,344,951
20. Data Network Circuit Capacity	\$	-	\$	-	\$	1,013,760	\$	1,013,760	\$	1,013,760	\$ 3,041,280
Authority 10 orders from Tall Downson											
Anticipated Savings from Toll Bypass 21. Circuits	\$	(811,853)	\$ (109	,710)	¢.	(87,768)	¢.	(87,768)		(1,097,099)	\$ (2,194,198
22. Toll Bypass	\$	(011,000)	(\$460		φ	(\$788,662)	Φ	(\$1,442,343)		(\$2,504,883)	\$ (5,196,036
23. FTE Savings			(ψ.οσ	,,	\$	(308,659)	\$	(514,432)			\$ (1,851,956
24. MACs	\$	(895,065)	\$ (1,210	,448)	\$	(1,468,274)	\$	(1,610,819)	\$	(1,689,581)	\$ (6,874,188
25. Total Anticipated Savings	\$	(1,706,918)	\$ (1,780	,305)	\$	(2,653,364)	\$	(3,655,363)	\$	(6,320,428)	\$ (16,116,378
26. Total Ongoing Costs/(Savings)	\$	(1,988,054)	\$ 858	,301	\$	1,806,027	\$	1,419,630	\$	(826,050)	\$ 1,269,854
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	\$	(3,594,453)	¢ 2.475	,216	•	6,255,754	•	7,954,970	•	7,816,027	\$ 20,907,515
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	Þ	(3,394,433)	\$ 2,475	,210	Ą	6,255,754	Ą	7,954,970	Ą	7,010,027	\$ 20,907,513
Decentralized	Doto N	lotwork Bofr	ach Leco//C	win	~a)						
28. ATS Migration	S S	(6.262.923)	\$ (12.525		gə <i>j</i>	(12,525,846)	¢	(12,525,846)	I ¢	(12,525,846)	\$ (56,366,307
29. MAGNET/WAN FTE	\$	29,800		, /	\$		\$	59,600		59,600	\$ (56,366,307)
EV. IIIONE I TICK I I E	Ψ	23,000	ψ 55	,500	Ψ	33,000	Ψ	53,000	Ψ	33,000	Ψ 200,200
30. Telephony Services											\$
a. 35 or less Employees											\$
1. Implementation											\$
A. Installation	\$	23,912							<u> </u>		\$ 23,912
B. Phone Purchase	\$	10,675							<u> </u>		\$ 10,675 \$
2. Monthly A. Line	\$	107,604	\$ 215	,208	\$	215,208	6	215,208	\$	215,208	\$ 968,436
A. Line B. Voice Messaging	\$,208	\$	64,050	\$	64,050			\$ 968,436
b. 36 plus Employees refer to 7. IP Telephony Numbers	Ψ	32,023	Ψ 04	,000	Ψ	0-7,000	÷	04,030	Ψ	0-7,000	ψ 200,220

31. Long Distance									S	-
a. ATS Long Distance Charges	\$	3,222,294	\$	6,444,588	\$ 6,444,588	\$ 6,444,58	8 \$	6,444,588	\$	29.000.646
b. ATS Private Tandem Network Minutes	\$	457,396	\$	377.041				182,958	\$	1,558,293
c. Carrier PICX	\$	140,000	Ψ	011,041	ψ 000,044	Ψ 2-10,00	-, ψ	102,000	\$	140,000
C. Garrier Flox	V	140,000							Ψ	140,000
32. Web Hosting									S	
a. Implementation	\$	166,000							\$	166,000
b. Monthly	\$	740	¢	1.481	\$ 1,481	\$ 1,48	1 \$	1,481	ę.	6,664
b. Montany	ų.	740	Ψ	1,401	Ψ 1,401	Ψ 1,40	ΙΨ	1,401	Ψ	0,004
33. ISP									S	_
a. 35 or less Employees									\$	
1. Transport									\$	_
A. Implementation	\$	4,257							\$	4,257
B. Monthly	\$	22,704	¢	45,408	\$ 45,408	\$ 45,40	8 \$	45,408	\$	204,336
2. Internet	Φ	22,704	Ф	45,406	\$ 45,406	\$ 45,40	0 0	45,406	\$	204,330
A. Implementation	\$	645	<u> </u>			 	+		\$	645
			•	44.000	e 44.000	f 11.00	c 6	44.000	-	
B. Monthly	\$	5,663	\$	11,326	\$ 11,326	\$ 11,32	υ \$	11,326	\$	50,968
b. 36 plus Employees			 			<u> </u>	+		\$	
1. Transport		10 =00							\$	-
A. Implementation	\$	49,500							\$	49,500
B. Monthly	\$	66,000	\$,	\$ 132,000			132,000	\$	594,000
2. Internet Monthly	\$	234,300	\$	468,600	\$ 468,600	\$ 468,60	0 \$	468,600	\$	2,108,700
34. Call Centers									\$	-
a. Startup	\$	5,089,300							\$	5,089,300
b. Monthly									\$	-
1. Carrier Costs	\$	120,600	\$					241,200	\$	1,085,400
2. Vendor Support	\$		\$	284,065				284,065	\$	1,278,293
3. Equip/Maint/License	\$		\$	508,930				508,930	\$	2,290,185
4. FTE Costs	\$	140,000	\$	280,000	\$ 280,000	\$ 280,00	0 \$	280,000	\$	1,260,000
35. Connection to PSTN									\$	-
a. 35 or less Employees refer to 27. a.									\$	-
b. 36 to 100 Employees									\$	-
1. Implementation	\$	7,200							\$	7,200
2. Monthly	\$	86,400	\$	172,800	\$ 172,800	\$ 172,80	0 \$	172,800	\$	777,600
c. 101 - 245 Employees									\$	-
1. Implementation	\$	14,400							\$	14,400
2. Monthly	\$	172,800	\$	345,600	\$ 345,600	\$ 345,60	0 \$	345,600	\$	1,555,200
d. 246 plus Emloyees	·							·	\$	-
1. Implementation	\$	69,597							\$	69,597
2. Monthly	S	835,164	\$	1,670,328	\$ 1,670,328	\$ 1,670,32	8 \$	1,670,328	\$	7,516,476
	1.7	000,.0.	*	.,0. 0,0_0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1,010,000	*	.,,.
36. FTE	\$	561,057	\$	1,122,114	\$ 1,122,114	\$ 1,122,11	4 \$	1,122,114	\$	5,049,512
37. Total Decentralized Loss/(Savings)	Š	5,803,608		(81,508)				(275,590)		5,070,312
or rotal 2000 mailed Ecotrod migo	¥	0,000,000	_	(01,000)	¥ (100,204	(217,00	~,	(210,000)	*	0,010,012
38. TCO Decentralized	\$	68,577,857	¢	68,762,411	\$ 72,466,253	\$ 74,105,67	0 0	73,909,140	¢	357,821,340
30. TOO Decentralized	\$	00,077,007	Ψ	00,702,411	Ψ 12,400,253	Ψ 74,105,67	ОФ	73,909,140	φ	337,021,340
CO. Net Least (Oscionary) Beauty lived		0.000 (==	•	0.000.700	0.00===:	A 7.700.00	0 0	7.540.400	•	05 077 607
39. Net Loss/(Savings) Decentralized	\$	2,209,155	\$	2,393,708	\$ 6,097,551	\$ 7,736,97	ь \$	7,540,438	\$	25,977,827
40. Debt Services Remaining									\$	23,572,727

Financial Assumptions: Decentralized - Data Network Refresh (Toll Bypass) & IP Telephony

- 1. TCO Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
- 2. Cabling Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
- 3. Power in Closets Upgrades needed to support IP Telephony:
 - a. Security assume that all closets have capability to lock today.
 - b. Power 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ \$750/room; 95% of rooms will need a large capacity UPS @ \$3700/room
 - c. Number of closets of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus 175 IDF & 23 MDF; off Phoenix mall sites 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
 - d. Environmental 95% of closets need isolated A/C controls @ \$500/room; 90% of MDF rooms need separte A/C unit at \$2500/room.
 - e. Installation Hardware 10% of closets require additional data rack & associated cable management components @ \$750/room.
- 4. Data Network Refresh: based on list prices & government discount; refresh based on 4 year cycle.
- 5. Data Network Circuit Capacity Implementation costs to expand data network to handle increased voice traffic:
 - a. Anything less than a T1 is upgraded to a T1
 - b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
 - c. T1's are available to all State sites.
 - d. Install @ \$700 & existing monthly average costs from TCO
- 6. Network Monitoring Tools Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities exception is DES with 2 due to size & diversity. Costs based on list prices & government discounts.
- 7. IP Telephony:
 - a. Core network & voice services enginneered for redundancy & survivability
 - b. Engineered for basic 911 (additional costs may be required for E911).
 - c. Remote sites where practicable, routers installed instead of call processors.
 - d. Costs based on list prices & government discounts.
 - e. Integrator costs of 10% are included in the implementation costs.
 - f. Migration to IP Telephony over 5 years based on year 1 transition of ATS customer to IP Telephony. PBX useful life, data network upgrade. & building cabling needs.
- 8. Training Train the trainers session: 42 IT voice personnel @ \$14K/person & 42 IT WAN personnel @ \$6K/person.
- 9. Trade-In Value 10% of capital investment based on bids received by State of Alaska.
- 10. Total Refresh & IPT Implementation Sum of items 2 through 9.
- 11. Annual Debt Service Financing of Implementation costs @ 3.4%.
- 12. Less Base Capital Budget Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
- 13. Net Loss/(Savings) Sum of items 10 through 12.
- 14. Data Network Refresh Maintenance Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
- 15. Network Monitoring Tools Maintenance Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
- 16. Replace by Data Network Refresh Maintenance Ongoing data network maintenance costs that have been replaced with new equipment.
- 17. IP Telephony Maintenance Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
- 18. Replace by IP Telephony Maintenance Ongoing voice equipment maintenance costs that have been replaced with new equipment.
- 19. Net Maintenance Sum of items 14. through 18.
- 20. Data Network Circuit Capacity Ongoing costs for circuits identified in item 5.
- 21. Circuits Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
- 22. Toll Bypass Savings in long distance charges as the voice traffic is migrated to the data network:
 - a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
 - b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
 - c. Year 1 no savings.
 - d. Year 2 20% of minutes where converged network available.
 - e. Year 3 30% of minutes where converged network available.
 - f. Year 4 50% of minutes where converged network available.
 - g. Year 5 80% of minutes where converged network available.
 - h. Year 6 100% of minutes where converged network available (not shown in financials as is only 5 year view).
- 23. FTE Savings Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of \$54037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 & 2 no savings
 - b. Year 3 3%
 - c. Year 4 5 %
 - d. Year 5 10%
- 24. MACs Savings with moves, adds and changes due to implementation of IP Telephony:
 - a. MAC average annual cost of \$40 per employee based on average between ATS @ \$16.28/employee & industry average @ \$48/employee.
 - b. Savings each year based on % migration to IP Telephony.
- 25. Total Anticipated Savings Sum of items 21. through 24.
- 26. Total Ongoing Costs/(Savings) Sum of items 19., 20., & 25.
- 27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IP Telephony.
- $28.\ ATS\ Migration\ -\ Migration\ completed\ after\ year\ 1;50\%\ of\ ATS\ costs\ removed\ year\ 1;100\%\ year\ 2\ -\ 5.$
- 29. MAGNET/WAN FTE 1 WAN FTE in ISD to manage network for agency mainframe applications that have traffic on MAGNET; average annual loaded salary from TCO \$59.6K.
- 30. Telephony Services Implementation & ongoing costs for agency employees migrating from ATS services:
 - a. 35 employees or less Purchase Centrex services from statewide carrier contracts:
 - 1. Implementation per Centrex line \$56
 - 2. Cost to purchase phone \$25
 - 3. Monthly line charge \$42.00
 - 4. Monthly voice mail \$12.50

- b. 36 Plus Employees Migrating to IP Telephony & calculated in line 7.
- 31. Long Distance Carrier bills paid by ATS will now be paid by each agency separately:
 - a. 50% charged to agencies year 1 & 100% year 2-5 (offset for toll bypass in item 22.).
 - b. Agencies will pay long distance rates to the Carriers @ \$0.055/minute for traffic currently on the ATS private voice network; 50% of traffic year 1 & 100% yer 2-5 & offset for toll bypass in item 22.
 - c. One time charge of \$10 to change the Carrier PICX on each DID trunk and Centrex line conversion of 14,000 lines.
- 32. Web Hosting Transfer of agencies utilizing ATS for web hosting:
 - a. Implementation costs \$1000 transfer & \$1000 setup per web site
 - b. Monthly costs \$12/10 mb.
 - c. 75 agencies with 83 web sites
- 33. ISP Transfer of agencies utilizing ATS for ISP (used ATS handset counts):
 - a. 35 or less employees:
 - 1. Transport 1 DSL per agency; implementation charge \$99; monthly charge \$88
 - 2. Internet Implementation \$15/employee; monthly charge \$21.95/employee
 - b. Medium & Large Agencies:
 - 1. Transport 1 T1 per agency; Implementation charge \$900; monthly charge \$200
 - 2. Internet \$710/month charge/agency for ISP bandwidth & agencies have their own e-mail
- 34. Call Centers Agencies currently utilizing ATS for Call Centers will implement their own; implementation & ongoing costs based on costs to replicate ATS Call Centers.
- 35. Connection to PSTN:
 - a. Small agencies have Cenrex as shown in item 30.
 - b. Agencies 36 100 employees at location 1 T1 including 2-way DID; implementation cost \$900; monthly \$1800
 - c. Agencies 101 245 employees at location 2 T1's including 2-way DID; implemention cost \$900/T1; monthly \$1800/T1
 - d. 246 plus employees at location for every 100 employees/location need 1 T1; implementation cost \$900/T1; monthly \$1800/T1
- 36. FTE Additional FTE needs due to agencies now handling own telephone & WAN services; used industry standard of 1 IT employee/495 ports; average annual salary based on annual average loaded salary of \$54037 for voice/WAN employee from TCO.
- 37. Total Decentralized Loss/(Savings) Sum of items 28. Through 36.
- 38. TCO Dencentralized Sum of items 1., 27., & 37.; represents new TCO after implementing Data Network Refresh, IP Telephony, and the Decentralized service delivery option.
- 39. Net Loss/(Savings) Decentralized Difference of items 1. & 38.; represents incremental impact to TCO.
- 40. Debt Services Remaining debt service remaining after year 5.

Shared Services - Data Network Refresh (Toll Bypass)

Shared Services - Data Network Refresh (Toll Bypass)		Year 1	Y	ear 2		Year 3		Year 4		Year 5	Total
1. TCO	\$	66,368,703	\$	66,368,703	\$	66,368,703	\$	66,368,703	\$	66,368,703	\$331,843,513
Implementation	Data	a Network Re	fresh ((Toll Bypa:	ss)						
2. Cabling	\$		\$		\$		\$		\$	-	\$0
3. Power in Closets		\$0		\$0		\$0		\$0		\$0	\$0
4. Data Network Refresh	<u> </u>										
a. Equipment	\$	7,547,631		3,271,296	\$	3,271,296	\$	3,271,296	\$	3,271,296	\$20,632,814
b. Installation	\$	811,322		648,697	\$,	\$	648,697	\$	648,697	\$3,406,111
5.Data Network Circuit Capacity	\$		\$		\$		\$	-	\$	-	\$429,000
6.Network Monitoring Tools	\$	2,917,748	\$	- \$0	\$	- \$0	\$	\$0	\$	- \$0	\$2,917,748
7. IP Telephony	-	\$0		\$0		\$ 0		\$0		\$0	\$0
a. Equipment b. Installation	-										
8. Training	+	\$0		\$0		\$0		\$0		\$0	\$0
9. Trade-in Value	+-	(\$754,763)		(\$327,130)	_	(\$327,130)	-	(\$327,130)	-	(\$327,130)	(\$2,063,281)
10. Total Refresh Implementation		\$10,521,938		\$3,592,863		\$4,021,863		\$3,592,863		\$3,592,863	\$25,322,392
11. Less Base Capital Budget	\$	(11,357,107)	\$	(11,357,107)	\$	(11,357,107)	\$	(11,357,107)	\$	(11,357,107)	
12. Net Loss/(Savings)	\$	(835,169)		(7,764,244)		(7,335,244)		(7,764,244)		(7,764,244)	
TE. Net Loos (ournings)	Ψ	(000,100)	Ψ	(1,104,244)	Ψ	(1,000,244)	Ψ	(1,104,244)	Ψ	(1,104,244)	ψ (01,400,140)
Ongoing Costs/(Sav	ings)	Data Networ	rk Refr	esh (Toll E	Вур	ass)					
Maintenance:											
13. Data Network Refresh	\$	-	\$	551,732	\$	875,339	\$	1,198,946	\$	1,522,553	\$4,148,570
14. Network Monitoring Tools	\$	-	\$,	\$	212,611	\$	318,916	\$	425,221	\$1,063,053
15. Replace by Data Network Refresh Maintenance		(\$80,873)		(\$242,619)		(\$404,364)		(\$566,110)		(\$646,983)	(\$1,940,950)
16. Net Maintenance		(\$80,873)		\$309,113		\$470,975		\$632,836		\$875,570	\$2,207,620
17. Data Network Circuit Capacity	\$	-	\$	-	\$	1,013,760	\$	1,013,760	\$	1,013,760	\$3,041,280
Anticipated Savings from Toll Bypass											
18. Circuits	1	(\$137,137)		(\$411,412)		(\$685,687)		(\$959,962)		(\$1,097,099)	(\$3,291,297)
19. Toll Bypass	1	(\$137,137)		(\$156,555)		(\$469,666)		(\$1,174,164)		(\$2,504,883)	(\$4,305,268)
20. FTE Savings	1	ΨΟ		(ψ130,333)		(\$308,659)		(\$514,432)		(\$1,028,864)	(\$1,851,956)
21. MACs		\$0		\$0		(ψ300,039) \$0		\$0		\$0	(ψ1,031,930) \$0
22. Total Anticipated Savings		(\$137,137)		(\$567,967)		(\$1,464,012)		(\$2,648,558)		(\$4,630,847)	(\$9,448,521)
III i saar amarparea carrigo		(\$101,101)		(4001,001)		(+1,101,012)		(\$2,0.0,000)		(\$ 1,000,011)	(\$0,110,021)
23. Total Ongoing Costs/(Savings)		(\$218,010)		(\$258,854)		\$20,723		(\$1,001,962)		(\$2,741,517)	(\$4,199,621)
		(, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		(,,		, ,		(+ / / /		(, , , , , ,	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
24. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	\$	(1,053,179)	\$	(8,023,098)	\$	(7,314,521)	\$	(8,766,206)	\$	(10,505,760)	\$ (35,662,764)
Share	d Se	rvices Loss/	(Savin	as)							
25. FTE Savings	T	\$0	34	(\$514,432)		(\$1,028,864)		(\$1,028,864)		(\$1,028,864)	(\$3,601,026)
26. Total Shared Svcs Loss/(Savings)		\$0		(\$514,432)		(\$1,028,864)		(\$1,028,864)		(\$1,028,864)	(\$3,601,026)
		ΨΟ		(40, .52)		(+1,020,304)		(4.,020,004)		(41,020,004)	(\$0,00.,020)
27. TCO Shared Services		\$65,315,523		\$57,831,173		\$58,025,317		\$56,573,632		\$54,834,078	\$292,579,723
21. 100 01.1.000		\$00,010,020		ψο.,οοι,170		ψ00,020,011		ψου,υτο,υσε		φοτ,σοτ,στο	Ψ202,010,120
28. Net Loss/(Savings) Shared Service		(\$1,053,179)		(\$8,537,530)		(\$8,343,385)		(\$9,795,070)		(\$11,534,625)	(\$39,263,790)
20. Hot 2003/Outringo/ Oliared Del Vice		(ψ1,000,179)		(40,001,000)		(ψυ,υπυ,υυυ)		(ψυ, ι υυ, υ ι υ)		(ψ11,004,020)	(\$33,203,730)

Financial Assumptions: Shared Services - Data Network Refresh (Toll Bypass)

- 1. TCO Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
- 2. Cabling Not applicable.
- 3. Power in Closets Not applicable
- 4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
- 5. Data Network Circuit Capacity Implementation costs to expand data network to handle increased voice traffic:
 - a. Anything less than a T1 is upgraded to a T1
 - b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
 - c. T1's are available to all State sites.
 - d. Install @ \$700 & existing monthly average costs from TCO
- 6. Network Monitoring Tools Implemented year 1:1 per main site with LANWAN/Voice management capabilities exception is DES with 2 due to size & diversity. List prices plus government discounts.
- 7. IP Telephony Not applicable.
- 8. Training Not applicable.
- 9. Trade-In Value 10% of capital investment.
- 10. Total Refresh Implementation Sum of items 2 through 9.
- 11. Less Base Capital Budget Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
- 12. Net Loss/(Savings) Sum of items 10 through 11.
- 13. Data Network Refresh Maintenance Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
- 14. Network Monitoring Tools Maintenance Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
- 15. Replace by Data Network Refresh Maintenance Ongoing data network maintenance costs that have been replaced with new equipment.
- 16. Net Maintenance Sum of items 13. through 15.
- 17. Data Network Circuit Capacity Ongoing costs for circuits identified in item 5.
- 18. Circuits Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
- 19. Toll Bypass Savings in long distance charges as the voice traffic is migrated to the data network:
 - a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
 - b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass
 - c. Year 1 no savings.
 - d. Year 2 20% of minutes where converged network available.
 - e. Year 3 30% of minutes where converged network available.
 - f. Year 4 50% of minutes where converged network available.
 - g. Year 5 80% of minutes where converged network available.
 - h. Year 6 100% of minutes where converged network available (not shown in financials as is only 5 year view).
- 20. FTE Savings Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of \$54,037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 & 2 no savings b. Year 3 - 3%
 - c. Year 4 5 %
 - d. Year 5 10%
- 21. MACs Not applicable.
- 22. Total Anticipated Savings Sum of items 18. through 21.
- 23. Total Ongoing Costs/(Savings) Sum of items 16., 17., & 22.
- 24. Net Loss/(Savings) Data Network Refresh (Toll Bypass) Sum of items 12. & 23.; represents incremental impact of implementing Data Network Refresh.
- 25. FTE Savings Expected FTE savings due to centralizing telecommunications services; based on current voice/WAN average annual loaded salary of \$54037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 no savings.
 - b. Year 2 5% c Year 3 - 5 - 10%
- 26. Total Shared Services Loss/(Savings) Sum of item 25.
- 27. TCO Shared Services Sum of items 1., 24., & 26.; represents new TCO after implementing Data Network Refresh for the Shared Services service delivery option.
- 28, Net Loss/(Savings) Shared Services Difference of items 1, & 27.: represents incremental impact to TCO.

Shared Services - Data Network Refresh (Toll Bypass) IP Telephony

Shared Services - Data Network Refresh (Toll Bypass) & IP Telephony		Year 1		Year 2	Year 3	Yea	ar 4	Year 5	Total
1. TCO	\$	66,368,703	¢	66,368,703	\$ 66,368,703	t s	6,368,703	\$ 66,368,703	\$331,843,51
1.100	Φ	00,308,703	φ	00,300,703	φ 00,308,703	\$ 0	0,300,703	\$ 00,308,703	\$331,643,3
Implementation	Data N	etwork Refre	sh (Toll Bynass)	& IPT				
2. Cabling	\$	5,789,800		5,202,200		2	4,964,600	\$ 4,964,600	\$ 25,965,00
3. Power in Closets	\$		\$	459,135			409,350		
4. Data Network Refresh		000,020	Ψ	400,100	Ψ 420,040	Ψ	400,000	Ψ 400,000	\$
a. Equipment	\$	7,547,631	\$	3,271,296	\$ 3,271,296	\$	3,271,296	\$ 3,271,296	\$ 20,632,8
b. Installation	\$		\$	648,697		\$	648,697		
5.Data Network Circuit Capacity	\$	-	\$	-	\$ 429,000	\$	-	\$ -	\$ 429,0
6.Network Monitoring Tools	\$	2,917,748	\$	-	\$ -	\$	-	\$ -	\$ 2,917,7
7. IP Telephony									\$
a.Equipment	\$	8,664,893	\$	6,210,002	\$ 5,791,326	\$	5,581,988	\$ 4,724,243	\$ 30,972,4
b. Installation	\$	2,553,665	\$		\$ 1,780,630	\$	1,722,669		
8. Training	\$	- ,	\$	164,576		\$	150,579		
9. Trade-In Value	\$			(948,130)			(885,328)		
10. Total Refresh & IPT Implementation	\$	27,369,962	\$	16,904,329	\$ 16,639,677	\$ 1	5,863,850	\$ 15,079,665	\$ 91,857,4
11. Annual Debt Service	<u> </u>	\$5,960,191		\$9,641,345	\$13,264,867		6,719,441	\$20,003,249	
12. Less Base Capital Budget	\$	(11,357,107)		(11,357,107)			1,357,107)		
13. Net Loss/(Savings)	\$	(5,396,916)	\$	(1,715,762)	\$ 1,907,760	\$	5,362,334	\$ 8,646,142	\$ 8,803,5
Ongoing Costs/(Savi	ngs) Da	ata Network F	Refre	esh (Toll Byp	oass) & IPT				
Maintenance:									
14. Data Network Refresh	\$		\$	551,732			1,198,946		
15. Network Monitoring Tools	\$		\$	106,305			318,916		
16. Replace by Data Network Refresh Maintenance	\$	(80,873)		(242,619)			(566,110)		
17. IP Telephony	\$		\$	2,013,314			3,409,053		
18. Replace by IP Telephony Maintenance	\$		\$	(330,869)			(661,738)		
19. Net Maintenance	\$	(202,772)	\$	2,097,864	\$ 3,137,008	\$	3,699,066	\$ 4,328,592	\$ 13,059,7
			•					4 4 4 4 5 5 5 6	
20. Data Network Circuit Capacity	\$	-	\$	-	\$ 1,013,760	\$	1,013,760	\$ 1,013,760	\$ 3,041,2
Auditoria I Octobra form Tell Borras									
Anticipated Savings from Toll Bypass 21. Circuits	\$	(137,137)	¢.	(411,412)	\$ (685,687)	¢	(959,962)	\$ (1,097,099)	\$ (3,291,2
22. Toll Bypass	\$		\$		\$ (469,666)		1,174,164)		
23. FTE Savings	-		Ψ	(130,333)	\$ (308,659)		(514.432)		
24. MACs	\$	(477,864)	\$	(814,452)			1,437,140)		
25. Total Anticipated Savings	\$	(615,002)		(1,382,420)			4,085,698)		
20. Total Antioipatou ournigo	Ť	(010,002)	Ψ	(1,002,420)	Ψ (Σ,000,ΣΣ0)	,	4,000,000)	(0,020,420)	ψ (10,001,7
26. Total Ongoing Costs/(Savings)	\$	(817,774)	\$	715,444	\$ 1,552,545	S	627,129	\$ (978,076)	\$ 1,099,2
		(011,111,	-		* 1,000,010	*	,	(0.0,0.0)	,,,,,,
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT	\$	(6,214,689)	\$	(1,000,318)	\$ 3,460,305	\$	5,989,463	\$ 7,668,066	\$ 9,902,8
		rvices Loss/	(Sav						
28. FTE Savings	\$	-	\$	(514,432)			1,028,864)		
29. Total Shared Svcs Loss/(Savings)	\$	-	\$	(514,432)	\$ (1,028,864)	\$ (1,028,864)	\$ (1,028,864)	\$ (3,601,0
	الجبد								
30. TCO Shared Services	\$	60,154,013	\$	64,853,952	\$ 68,800,143	\$ 7	1,329,301	\$ 73,007,904	\$ 338,145,3
31. Net Loss/(Savings) Shared Service	\$	(6,214,689)	\$	(1,514,750)	\$ 2,431,440	\$	4,960,598	\$ 6,639,202	
32. Debt Services Remaining									\$34,427,1

Financial Assumptions: Shared Services - Data Network Refresh (Toll Bypass) & IP Telephony

- 1. TCO Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
- 2. Cabling Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
- 3. Power in Closets Upgrades needed to support IP Telephony:
 - a. Security assume that all closets have capability to lock today.
 - b. Power 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ \$750/room; 95% of rooms will need a large capacity
 - c. Number of closets of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus 175 IDF & 23 MDF; off Phoenix mall sites 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
 - d. Environmental 95% of closets need isolated A/C controls @ \$500/room; 90% of MDF rooms need separte A/C unit at \$2500/room.
 - e. Installation Hardware 10% of closets require additional data rack & associated cable management components @ \$750/room.
- 4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
- 5. Data Network Circuit Capacity Implementation costs to expand data network to handle increased voice traffic:
 - a. Anything less than a T1 is upgraded to a T1
 - b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
 - c. T1's are available to all State sites.
 - d. Install @ \$700 & existing monthly average costs from TCO
- 6. Network Monitoring Tools Implemented year 1,1 per main site with LAN/WAN/Voice management capabilities exception is DES with 2 due to size & diversity. List price plus government discounts.
- 7. IP Telephony:
 - a. Core network & voice services enginneered for redundancy & survivability
 - b. Engineered for basic 911 (additional costs may be required for E911).
 - c. Remote sites where practicable, routers installed instead of call processors.
 - d. List prices with government discounts.
 - e. Integrator costs of 10% are included in the implementation costs.
 - f. Migration to IP Telephony over 5 years based on PBX useful life, data network upgrade, & building cabling needs.
- 8. Training Train the trainers session: 42 IT voice personnel @ \$14K/person & 42 IT WAN personnel @ \$6K/person.
- 9. Trade-In Value 10% of capital investment based on bids received by State of Alaska.
- 10. Total Refresh & IPT Implementation Sum of items 2 through 9.
- 11. Annual Debt Service Financing of Implementation costs @ 3.4%.
- 12. Less Base Capital Budget Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
- 13. Net Loss/(Savings) Sum of items 10 through 12.
- 14. Data Network Refresh Maintenance Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
- 15. Network Monitoring Tools Maintenance Ongoing maintenance costs associated with item 6: assumed no maintenance costs first year.
- 16. Replace by Data Network Refresh Maintenance Ongoing data network maintenance costs that have been replaced with new equipment.
- 17. IP Telephony Maintenance Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
- 18. Replace by IP Telephony Maintenance Ongoing voice equipment maintenance costs that have been replaced with new equipment.
- 19. Net Maintenance Sum of items 14. through 18.
- 20. Data Network Circuit Capacity Ongoing costs for circuits identified in item 5.
- 21. Circuits Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
- 22. Toll Bypass Savings in long distance charges as the voice traffic is migrated to the data network:
 - a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
 - b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
 - c. Year 1 no savings.
 - d. Year 2 20% of minutes where converged network available.
 - e. Year 3 30% of minutes where converged network available.
 - f. Year 4 50% of minutes where converged network available.
 - g. Year 5 80% of minutes where converged network available.
 - h. Year 6 100% of minutes where converged network available (not shown in financials as is only 5 year view).
- 23. FTE Savings Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of \$54,037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 & 2 no savings
 - b. Year 3 3%
 - c. Year 4 5 %
 - d. Year 5 10%
- 24. MACs Savings with moves, adds and changes due to implementation of IP Telephony:
 - a. MAC average annual cost of \$40 per employee based on average between ATS @ \$16.28/employee & industry average @ \$48/employee.
 - b. Savings each year based on % migration to IP Telephony.
- 25. Total Anticipated Savings Sum of items 21. through 24.
- 26. Total Ongoing Costs/(Savings) Sum of items 19., 20., & 25.
- 27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IPT Telephony.
- 28. FTE Savings Expected FTE savings due to centralizing telecommunications services; based on current voice/WAN average annual loaded salary of \$54037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 no savings.
 - b. Year 2 5%
 - c. Year 2 5 10%
- 29. Total Shared Services Loss/(Savings) Sum of item 28.
- 30. TCO Shared Services Sum of items 1., 27., & 29: represents new TCO after implementing Data Network Refresh & IP Telephony for the Shared Services service delivery option.
- 31. Net Loss/(Savings) Shared Services Difference of items 1. & 30.; represents incremental impact to TCO.
- 32. Debt Services Remaining Debt service remaining after year 5.

Privatized - Data Network Refresh (Toll Bypass)

Privatized - Data Network Refresh (Toll Bypass)		Year 1		Year 2		Year 3		Year 4		ear 5		Total
1. TCO	\$	66,368,703	¢	66,368,703	¢	66,368,703	¢	66,368,703	¢	66,368,703		\$331,843,513
1.100	Ψ	00,300,703	Ψ	00,300,703	Ψ	00,300,703	Ψ	00,300,703	Ψ	00,500,705		\$331,043,313
Implementation	ո Dat	a Network Re	fres	sh (Toll Bypa	ss)							
2. Cabling	\$		\$		\$	-	\$	-	\$	-		\$0
3. Power in Closets		\$0		\$0		\$0		\$0		\$0		\$0
4. Data Network Refresh												
a. Equipment	\$	7,547,631		3,271,296		3,271,296		3,271,296		3,271,296		\$20,632,814
b. Installation	\$	811,322		648,697		648,697		648,697		648,697		\$3,406,111
5.Data Network Circuit Capacity	\$		\$	-	-	429,000	_	-	\$	-		\$429,000
6.Network Monitoring Tools	\$	2,917,748	\$	-	\$	-	\$	-	\$	-		\$2,917,748
7. IP Telephony		\$0		\$0		\$0		\$0		\$0		\$0
a. Equipment b. Installation	-											
8. Training		\$0		\$0		\$0		\$0		\$0		\$0
8. Training 9. Trade-in Value	+-	(\$754,763)		(\$327,130)	1	(\$327,130)		(\$327,130)		(\$327,130)		(\$2,063,281)
9. Trade-in value 10. Total Refresh Implementation		\$10,521,938		\$3,592,863		\$4,021,863		\$3,592,863		\$3,592,863		\$25.322.392
11. Less Base Capital Budget	\$	(11,357,107)	Ф	(11,357,107)	Ф	(11,357,107)	Ф	(11,357,107)	¢	(11,357,107)	Ф	(56,785,535)
12. Net Loss/(Savings)	\$	(835,169)		(7,764,244)		(7,335,244)		(7,764,244)		(7,764,244)		(31,463,143)
TE. Not 2000/(Gurnigo)	Ψ	(000,100)	Ψ	(1,104,244)	Ψ	(1,000,244)	Ψ	(1,104,244)	Ψ	(1,104,244)	Ψ	(01,400,140)
Ongoing Costs/(Sav	/inae) Data Netwo	rk R	ofresh (Toll	Rvn	2001						
Maintenance:	I) Data Netwo	I	terresir (Ton	Бур	ussj			İ			
13. Data Network Refresh	\$		\$	551,732	¢	875,339	\$	1,198,946	¢	1.522.553		\$4,148,570
14. Network Monitoring Tools	\$		\$	106,305		212,611		318,916		425,221		\$1,063,053
15. Replace by Data Network Refresh Maintenance		(\$80.873)	Ψ	(\$242.619)	Ψ	(\$404,364)	Ψ	(\$566,110)	Ψ	(\$646,983)		(\$1,940,950)
16. Net Maintenance	\$	(80,873)	\$	309,113	\$	470,975	\$	632,836	\$	875,570	\$	2,207,620
17. Data Network Circuit Capacity	\$		\$		\$	1,013,760	\$	1,013,760	\$	1,013,760	\$	3,041,280
Anticipated Savings from Toll Bypass												
18. Circuits	\$	(137,137)	\$	(411,412)	\$	(685,687)	\$	(959,962)	\$	(1,097,099)	\$	(3,291,297)
19. Toll Bypass	\$	-	\$	(156,555)		(469,666)		(1,174,164)		(2,504,883)		(4,305,268)
20. FTE Savings				(\$	(308,659)		(514,432)		(1,028,864)		(1,851,956)
21. MACs	\$	-	\$	-	\$		\$	-	\$	-	\$	
22. Total Anticipated Savings	\$	(137,137)	\$	(567,967)	\$	(1,464,012)	\$	(2,648,558)	\$	(4,630,847)	\$	(9,448,521)
23. Total Ongoing Costs/(Savings)	s	(218,010)	\$	(258,854)	ŝ	20,723	\$	(1,001,962)	\$	(2,741,517)	\$	(4,199,621)
25. Total Origining Oction(Currings)	Ť	(210,010)	Ť	(200,004)	Ψ	20,120	Ψ	(1,001,002)	_	(2,141,011)	<u> </u>	(4,100,021)
24. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	\$	(1,053,179)	\$	(8,023,098)	\$	(7,314,521)	\$	(8,766,206)	\$	(10,505,760)	\$	(35,662,764)
	rivoti	zed Loss/(Sa	vin	ne)								
25. FTE Savings	s s	(4,115,458)	VIII	(8,230,916)	¢	(8,230,916)	¢	(8,230,916)	¢	(8,230,916)	¢	(37,039,121)
26. Privatized Fee	\$	3,498,139		6,996,278		6,996,278		6,996,278		6,996,278		31,483,253
27. Total Privatized Loss/(Savings)	\$	(617,319)		(1,234,637)		(1,234,637)		(1,234,637)		(1,234,637)		(5,555,868)
2 van. i anizoa 2003/(Outingo)	¥	(017,010)	Ψ	(1,204,001)	Ψ	(1,204,001)	Ť	(1,204,001)	-	(1,204,001)	Ť	(0,000,000)
28. TCO Privatized	\$	64,698,205	\$	57,110,968	\$	57,819,544	\$	56,367,859	\$	54,628,305	\$	290,624,881
29. Net Loss/(Savings) Privatized	\$	(1,670,498)	\$	(9,257,735)	\$	(8,549,158)	\$	(10,000,843)	\$	(11,740,398)	\$	(41,218,632)
20. Hot 2000 (varings) / Hitalizou	Ψ	(1,070,400)	Ψ	(0,201,100)	Ψ	(0,040,100)	Ą	(10,000,040)	¥	(1,140,000)	Ψ	(71,210,002)

Financial Assumptions: Privatized - Data Network Refresh (Toll Bypass)

- 1. TCO Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
- 2. Cabling Not applicable.
- 3. Power in Closets Not applicable
- 4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
- 5. Data Network Circuit Capacity Implementation costs to expand data network to handle increased voice traffic:
 - a. Anything less than a T1 is upgraded to a T1
 - b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
 - c. T1's are available to all State sites.
 - d. Install @ \$700 & existing monthly average costs from TCO
- 6. Network Monitoring Tools Implemented year 1:1 per main site with LAN/WAN/Voice management capabilities exception is DES with 2 due to size & diversity. List prices plus government discounts.
- 7. IP Telephony Not applicable.
- 8. Training Not applicable.
- 9. Trade-In Value 10% of capital investment based on bids received by State of Alaska.
- 10. Total Refresh Implementation Sum of items 2 through 9.
- 11. Less Base Capital Budget Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
- 12. Net Loss/(Savings) Sum of items 10 through 11.
- 13. Data Network Refresh Maintenance Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
- 14. Network Monitoring Tools Maintenance Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
- 15. Replace by Data Network Refresh Maintenance Ongoing data network maintenance costs that have been replaced with new equipment.
- 16. Net Maintenance Sum of items 13. through 15.
- 17. Data Network Circuit Capacity Ongoing costs for circuits identified in item 5.
- 18. Circuits Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
- 19. Toll Bypass Savings in long distance charges as the voice traffic is migrated to the data network:
 - a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
 - b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
 - c. Year 1 no savings.
 - d. Year 2 20% of minutes where converged network available.
 - e. Year 3 30% of minutes where converged network available.
 - f. Year 4 50% of minutes where converged network available.
 - g. Year 5 80% of minutes where converged network available.
 - h. Year 6 100% of minutes where converged network available (not shown in financials as is only 5 year view).
- 20. FTE Savings Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of \$54,037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 & 2 no savings
 - b. Year 3 3% c. Year 4 - 5 %
 - c. Year 4 5 % d. Year 5 - 10%
- 21. MACs Not applicable.
- 22. Total Anticipated Savings Sum of items 18. through 21.
- 23. Total Ongoing Costs/(Savings) Sum of items 16., 17., & 22.
- 24. Net Loss/(Savings) Data Network Refresh (Toll Bypass) Sum of items 12. & 23.; represents incremental impact of implementing Data Network Refresh.
- 25. FTE Savings Expected FTE savings due to centralizing & privatizing telecommunications services; based on current voice/WAN average annual loaded salary of \$54037 (from TCO) & 190.4 employees (from TCO):
 - a. Privatized transition complete during year 1.
 - b. Year 1 40%
 - c. Year 2 5 80%
- 26. Privatized Fee 15% value proposition.
- 27. Total Privatized Loss/(Savings) Sum of item 25. & 26.
- 28. TCO As Is Sum of items 1., 24., & 27; represents new TCO after implementing Data Network Refresh for the Privatized service delivery option.
- 29. Net Loss/(Savings) Privatized Sum of items 1. & 28.; represents incremental impact to TCO.

Privatized - Data Network Refresh (Toll Bypass) & IP Telephony

Privatized - Data Network Refresh (Toll Bypass) & IP Telephony		Year 1	Υ	ear 2		Year 3		Year 4	,	Year 5		Total
1. TCO	\$	66,368,703	¢	66,368,703	¢	66,368,703	¢	66,368,703	¢	66,368,703		\$331,843,513
1.100	φ	00,300,703	Ψ	00,300,703	φ	00,300,703	φ	00,300,703	φ	00,300,703		\$331,0 4 3,313
Implementation Da	ata N	etwork Refre	sh (To	II Bypass)) & IF	PT						
2. Cabling	\$	5,789,800		5,202,200		5,043,800	\$	4,964,600	\$	4,964,600	\$	25,965,000
3. Power in Closets	\$	508,920		459,135		425,945		409,350		409,350		2,212,700
4. Data Network Refresh				·		·		·		·	\$	-
a. Equipment	\$	7,547,631		3,271,296		3,271,296		3,271,296			\$	20,632,814
b. Installation	\$	811,322		648,697	\$	648,697		648,697	\$	648,697	\$	3,406,111
5.Data Network Circuit Capacity	\$		\$	-	\$	429,000		-	\$	-	\$	429,000
6.Network Monitoring Tools	\$	2,917,748	\$	-	\$	-	\$	-	\$	-	\$	2,917,748
7. IP Telephony	_			0.010.000		= =0.4.000	_	= = 0.1.000		. =	\$	-
a.Equipment	\$	8,664,893					\$	5,581,988		4,724,243	\$	30,972,451
b. Installation	\$	2,553,665				1,780,630		1,722,669		1,710,454	\$	9,663,971
8. Training 9. Trade-In Value	\$	197,236		164,576 (948,130)		155,245	\$	150,579		150,579	\$	818,215
9. Trade-in value 10. Total Refresh & IPT Implementation	\$	(1,621,252) 27,369,962		(948,130) 16,904,329		(906,262) 16,639,677		(885,328) 15,863,850		(799,554) 15,079,665		(5,160,526) 91,857,483
10. Total Netresh & It Taliplementation	Ψ	21,303,302	Ψ	10,504,529	Ψ	10,039,077	Ψ	13,003,030	4	13,073,003	Ψ	31,037,403
11. Annual Debt Service	\$	5,960,191	\$	9,641,345	\$	13,264,867	\$	16,719,441	s	20,003,249	\$	65,589,093
12. Less Base Capital Budget	\$	(11,357,107)		(11,357,107)		(11,357,107)	\$	(11,357,107)		(11,357,107)		(56,785,535)
13. Net Loss/(Savings)	\$	(5,396,916)		(1,715,762)		1,907,760		5,362,334		8,646,142		8,803,558
		, , , ,		, , ,		, ,		, ,		, ,		
Ongoing Costs/(Saving	s) Da	ata Network F	Refresi	h (Toll Byr	nass	s) & IPT						
Maintenance:	T			(),		,			1			
14. Data Network Refresh	\$	-	\$	551,732	\$	875,339	\$	1,198,946	\$	1,522,553	\$	4,148,570
15. Network Monitoring Tools	\$	-	\$	106,305		212,611		318,916		425,221	\$	1,063,053
16. Replace by Data Network Refresh Maintenance	\$	(80,873)	\$	(242,619)		(404,364)	\$	(566,110)		(646,983)	\$	(1,940,950)
17. IP Telephony	\$	-	\$	2,013,314	\$	2,954,080	\$	3,409,053	\$	3,833,206	\$	12,209,654
18. Replace by IP Telephony Maintenance	\$	(121,899)	\$	(330,869)		(500,657)	\$	(661,738)		(805,405)	\$	(2,420,568)
19. Net Maintenance	\$	(202,772)	\$	2,097,864	\$	3,137,008	\$	3,699,066	\$	4,328,592	\$	13,059,758
20. Data Network Circuit Capacity	\$	-	\$	-	\$	1,013,760	\$	1,013,760	\$	1,013,760	\$	3,041,280
Anticipated Savings from Toll Bypass	•	(407.407)	r.	(444,440)	•	(005,007)	Φ.	(050,000)	œ.	(4.007.000)	\$	(3,291,297)
21. Circuits 22. Toll Bypass	\$	(137,137)	\$	(411,412) (156,555)		(685,687) (469,666)		(959,962) (1.174,164)		(1,097,099)	D	(4,305,268)
23. FTE Savings	φ	-	Φ	(136,333)	¢	(308,659)		(514,432)		(1,028,864)	\$	(1,851,956)
24. MACs	\$	(477,864)	\$	(814,452)	\$	(1,134,211)		(1,437,140)		(1,689,581)		(5,553,248)
25. Total Anticipated Savings	\$	(615,002)		(1,382,420)		(2,598,223)		(4,085,698)		(6,320,428)		(15,001,769)
	Ť	(010,000)	•	(1,002,120)	Ť	(=,===,===)	•	(1,000,000)	-	(0,020,120)	•	(10,001,100)
26. Total Ongoing Costs/(Savings)	\$	(817,774)	\$	715,444	\$	1,552,545	\$	627,129	\$	(978,076)	\$	1,099,269
								·				
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT	\$	(6,214,689)	\$	(1,000,318)	\$	3,460,305	\$	5,989,463	\$	7,668,066	\$	9,902,827
Pr	ivatiz	zed Loss/(Sa	vings)									
Pr 28. FTE Savings	ivatiz	zed Loss/(Sa (4,115,458)		(8,230,916)	\$	(8,230,916)	\$	(8,230,916)	\$	(8,230,916)	\$	(37,039,121)
28. FTE Savings 29. Privatized Fee			\$			(8,230,916) 6,996,278		(8,230,916) 6,996,278		(8,230,916) 6,996,278		(37,039,121)
28. FTE Savings	\$	(4,115,458)	\$	(8,230,916)	\$		\$		\$		\$	31,483,253
28. FTE Savings 29. Privatized Fee	\$	(4,115,458) 3,498,139 (617,319)	\$ \$	(8,230,916) 6,996,278	\$	6,996,278 (1,234,637)	\$	6,996,278	\$	6,996,278	\$	31,483,253
28. FTE Savings 29. Privatized Fee	\$	(4,115,458) 3,498,139	\$ \$	(8,230,916) 6,996,278	\$	6,996,278	\$	6,996,278	\$	6,996,278	\$	31,483,253 (5,555,868)
28. FTE Savings 29. Privatized Fee 30. Total Privatized Loss/(Savings)	\$ \$	(4,115,458) 3,498,139 (617,319)	\$ \$	(8,230,916) 6,996,278 (1,234,637)	\$	6,996,278 (1,234,637)	\$	6,996,278 (1,234,637)	\$	6,996,278 (1,234,637)	\$	31,483,253 (5,555,868)
28. FTE Savings 29. Privatized Fee 30. Total Privatized Loss/(Savings)	\$ \$	(4,115,458) 3,498,139 (617,319)	\$ \$	(8,230,916) 6,996,278 (1,234,637)	\$ \$	6,996,278 (1,234,637)	\$ \$	6,996,278 (1,234,637)	\$ \$	6,996,278 (1,234,637)	\$ \$	(37,039,121) 31,483,253 (5,555,868) 336,190,471 4,346,958 34,427,152

Financial Assumptions: Privatized - Data Network Refresh (Toll Bypass) & IP Telephony

- 1. TCO Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
- 2. Cabling Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
- 3. Power in Closets Upgrades needed to support IP Telephony:
 - a. Security assume that all closets have capability to lock today.
 - b. Power 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ \$750/room; 95% of rooms will need a large capacity UPS @ \$3700/room.
 - c. Number of closets of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus 175 IDF & 23 MDF; off Phoenix mall sites 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
 - d. Environmental 95% of closets need isolated A/C controls @ \$500/room; 90% of MDF rooms need separte A/C unit at \$2500/room.
 - e. Installation Hardware 10% of closets require additional data rack & associated cable management components @ \$750/room.
- 4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
- 5. Data Network Circuit Capacity Implementation costs to expand data network to handle increased voice traffic:
 - a. Anything less than a T1 is upgraded to a T1
 - b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
 - c. T1's are available to all State sites.
 - d. Install @ \$700 & existing monthly average costs from TCO
- 6. Network Monitoring Tools Implemented year 1,1 per main site with LAN/WAN/Voice management capabilities exception is DES with 2 due to size & diversity. List prices plus government discounts.
- 7. IP Telephony:
 - a. Core network & voice services enginneered for redundancy & survivability
 - b. Engineered for basic 911 (additional costs may be required for E911).
 - c. Remote sites where practicable, routers installed instead of call processors.
 - d. List prices with government discounts.
 - e. Integrator costs of 10% are included in the implementation costs.
 - f. Migration to IP Telephony over 5 years based on PBX useful life, data network upgrade, & building cabling needs.
- 8. Training Train the trainers session: 42 IT voice personnel @ \$14K/person & 42 IT WAN personnel @ \$6K/person.
- 9. Trade-In Value 10% of capital investment based on bids received by State of Alaska.
- 10. Total Refresh & IPT Implementation Sum of items 2 through 9.
- 11. Annual Debt Service Financing of Implementation costs @ 3.4%.
- 12. Less Base Capital Budget Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
- 13. Net Loss/(Savings) Sum of items 10 through 12.
- 14. Data Network Refresh Maintenance Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
- 15. Network Monitoring Tools Maintenance Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
- 16. Replace by Data Network Refresh Maintenance Ongoing data network maintenance costs that have been replaced with new equipment.
- 17. IP Telephony Maintenance Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
- 18. Replace by IP Telephony Maintenance Ongoing voice equipment maintenance costs that have been replaced with new equipment.
- 19. Net Maintenance Sum of items 14. through 18.
- 20. Data Network Circuit Capacity Ongoing costs for circuits identified in item 5.
- 21. Circuits Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
- 22. Toll Bypass Savings in long distance charges as the voice traffic is migrated to the data network:
 - a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
 - b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
 - c. Year 1 no savings.
 - d. Year 2 20% of minutes where converged network available.
 - e. Year 3 30% of minutes where converged network available.
 - f. Year 4 50% of minutes where converged network available.
 - g. Year 5 80% of minutes where converged network available.
 - h. Year 6 100% of minutes where converged network available (not shown in financials as is only 5 year view).
- 23. FTE Savings Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of \$54037 (from TCO) & 190.4 employees (from TCO):
 - a. Year 1 & 2 no savings
 - b. Year 3 3%
 - c. Year 4 5 %
 - d. Year 5 10%
- 24. MACs Savings with moves, adds and changes due to implementation of IP Telephony:
 - a. MAC average annual cost of \$40 per employee based on average between ATS @ \$16.28/employee & industry average @ \$48/employee.
 - b. Savings each year based on % migration to IP Telephony.
- 25. Total Anticipated Savings Sum of items 21. through 24.
- 26. Total Ongoing Costs/(Savings) Sum of items 19., 20., & 25.
- 27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IPT Telephony.
- 28. FTE Savings Expected FTE savings due to centralizing & privatizing telecommunications services; based on current voice/WAN average annual loaded salary of \$54037 (from TCO) & 190.4 employees (from TCO):
 - a. Privatized transition complete during year 1.
 - b. Year 1 40%
 - c. Year 2 5 80%
- 29. Privatized Fee 85% of FTE savings.
- 30. Total Privatized Loss/(Savings) Sum of item 28. & 29.
- 31. TCO Privatized Sum of items 1, 27, & 30; represents new TCO after implementing Data Network Refresh & IP Telephony for the Privatized service delivery option.
- 32. Net Loss/(Savings) Privatized Sum of items 1. & 31; represents incremental impact to TCO.
- 33. Debt Services Remaining Debt service remaining after year 5.